Environmental Management System (EMS) Alternative to Pollution Prevention Planning

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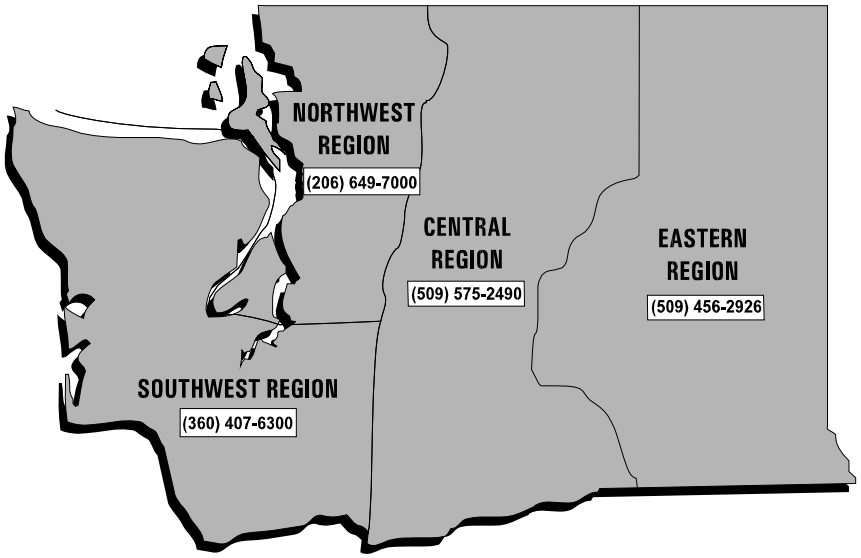

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Program Requirements

Environmental Management System (EMS) Alternative to Pollution Prevention Planning

1.0 Program Overview

This section describes the application process for the EMS Alternative and the criteria for remaining in the program once a system is approved. Definitions of terms and key concepts are also provided.

A facility required to prepare a Pollution Prevention Plan or Five Year Plan Update under provisions of RCW 70.95C may meet these requirements by submitting a written application describing how its environmental management system (EMS) meets the pollution prevention criteria described in section 2.0. Relevant policies and procedures may simply be referenced in the application, although narrative examples of how the EMS meets the criteria are helpful. This alternative is intended for facilities which already have an environmental management system in operation with most, if not all of the elements in Section 2.0.

The facility must agree to a site visit review by Ecology of written policies, plans, programs and other documents cited in the written documentation of the EMS. Ecology review of such documents will be limited to the relevant pollution prevention criteria, listed in Section 2.0. Except for the written documentation provided to Ecology, referenced documents may remain on-site at the facility.

Once receiving approval for this alternative, the facility must conduct a periodic assessment of implementation of the EMS and provide Ecology with annual pollution prevention performance reports.

1.1 Definitions and Concepts

1.1.1 Environmental Management System (EMS)

Throughout this document, the term "Environmental Management System", or EMS, is used to describe the organizational structure, responsibilities, practices, processes and resources for implementing and maintaining environmental management. To be considered for this alternative, Ecology has determined that pollution prevention, as defined herein, must be explicitly considered in such a system.

1.1.2 Pollution Prevention Criteria

Section 2.0 describes a set of pollution prevention criteria with which a facility must demonstrate compliance in order to receive approval for the EMS Alternative. It is important to distinguish between these criteria and an environmental management system. These criteria do not by themselves represent an environmental management system. Rather, they are key components of an environmental management system which, if adequately documented to Ecology, will be accepted from a facility in lieu of Pollution Prevention Plan or 5 year update.

Because the planning process requires identification and evaluation based on the waste management hierarchy, the definition of pollution prevention in the EMS alternative is particularly important. In evaluating applications, Ecology will be looking for a demonstration that the hierarchy of waste management options is being followed in both policy and implementation.

1.1.3 Relationship to ISO 14001

A facility which is in compliance with the ISO 14001 standard will recognize a number of similarities between that standard and these criteria. These criteria are structured to parallel the ISO standard as much as possible. The pollution prevention criteria described in Section 2.0 differ from the ISO 14001 standard in two significant respects:

1) These criteria are not as comprehensive or inclusive as the ISO 14001 standard, and
2) Ecology defines pollution prevention in these criteria as reductions of hazardous substances and pollutants at the source (see 1.1.4) whereas the ISO standard includes control and treatment options in its definition of prevention of pollution. This distinction is critical, since in order to be accepted as an alternative to a pollution prevention plan, a facility's EMS must address pollution prevention, as Ecology defines it, in policy and implementation.

1.1.4 Pollution prevention

Pollution prevention is defined to mean the use of processes or practices that reduce or eliminate the use of hazardous substances and the generation of pollutants or wastes at the source. This contrasts with pollution control which relies on end of pipe treatment. Pollution prevention also includes practices that reduce the use of energy, water or other resources through conservation or more efficient use.

Where pollution prevention is not feasible the EMS should include options for recycling, treatment and disposal, considered in that order.

1.2 Facility Documentation

The facility should provide as part of their application basic identifying information, including: facility name, industry type and a brief description of the products and/or services of the facility.

2.0 Pollution Prevention Criteria

The facility shall establish and maintain an environmental management system which must include the following pollution prevention criteria:

2.1 Pollution Prevention Policies

2 1.1 Policy Components

Adopts and implements policies that establish pollution prevention as the preferred approach to pollution management and ensure that these policies:

a) provide for recycling or treatment of hazardous wastes (in that order) where pollution prevention is not technically or economically feasible.
b) are available to the public on request
c) are actively communicated to employees
d) establish a commitment from top management to implement the policies and to review and evaluate the EMS at periodic intervals.

Note:
"Periodic assessment" is required in Section 2.3. This criterion (2.1.1.d) is meant to ensure that management is aware of the results of such review.

2.1.2 Continual Improvement

Adopts and implements policies and procedures which ensure ongoing identification, evaluation and implementation of pollution prevention opportunities in all decisions having environmental consequences. Evaluation is defined to include both technical and economic evaluation.

Please see Appendix A for more discussion and examples of continual improvement strategies and techniques.

2.2 Implementation

2.2.1 Objectives and Targets

Establishes and maintains documented pollution prevention objectives and targets. The objectives and targets should be consistent with pollution prevention policies and include measurable milestones and timeframes for implementation. Objectives should include, whenever possible, both:

a) identification and implementation of opportunities for reducing hazardous substance use and hazardous waste generation,
b) identification and adoption of improvements in the environmental management system which will better allow you to identify, evaluate and implement pollution prevention opportunities in the future

Note:
Facilities may want to describe objectives in terms of environmental performance indicators, described in Appendix B.

2.2.2 Roles and Responsibilities

Identifies the responsibilities, resources and timeframe necessary to implement objectives and targets.

2.2.3 Employee Training and Involvement

a) Provides for employee training in pollution prevention concepts and implementation at each relevant function and level.
b) Provides for employee involvement in identification and implementation of pollution prevention opportunities.

Note:
"Each relevant function and level" refers to employees whose jobs involve products or activities with a potential to impact the environment.

2.3 Monitoring and Measurement

2.3.1 Periodic Assessment

Provides for a periodic assessment of the implementation of the EMS elements addressed by these criteria and makes this assessment available to Ecology for review upon request. Any Ecology review of such documents will be limited to confirming compliance with the pollution prevention criteria. The assessment must be conducted at least annually, though it may be conducted more frequently. The results may be kept at the facility.

The periodic assessment may include an assessment of an entire environmental management system, but must at a minimum address the elements described in these criteria. The assessment may be either third party or internal. It must determine that each of these elements is continuing to operate within an environmental management system as described in the facility's application or as revised by that facility and documented in the annual Performance Report.

Note:
Management should be made aware of assessment results and appropriate adjustments made in objectives and targets as changing conditions warrant.

2.3.2 Annual Performance Report

An application to the EMS Alternative must include a commitment to prepare and submit to Ecology an annual pollution prevention performance report describing progress in meeting current objectives and targets. The report must include a reassertion, based on the periodic assessment, that all elements of the EMS described herein are in place and operative. Any significant changes relevant to the facility's EMS or pollution prevention program should be noted.

To track progress of ongoing activities with objectives and targets as required in the annual performance report, a facility may find it useful to identify environmental performance indicators. See Appendix B for a discussion and examples.

3.0 Withdrawal of approval

If a facility which has gained EMS Alternative status fails to submit an annual Pollution Prevention Performance Report, or if an annual report or other available information, such as significant compliance violations, shows that the facility's EMS no longer conforms to these criteria, Ecology may withdraw its approval. Ecology will notify the facility that is EMS Alternative Status is in jeopardy. If a facility cannot respond to Ecology's concerns within 90 days of notification and bring the EMS into conformance with the pollution prevention criteria, Ecology will withdraw its approval.

Once approval has been withdrawn, a facility must, within three months, submit a standard Pollution Prevention Plan per RCW 70.95C and WAC 173-307.

APPENDIX A

CONTINUAL IMPROVEMENT IN POLLUTION PREVENTION

Definition

Section 2.1 of the EMS Alternative refers to a policies and procedures related to continual improvement in pollution prevention. We have defined continual improvement to mean the ongoing identification, evaluation and implementation of pollution prevention opportunities.

Achieving Continual Improvement in Pollution Prevention

There are a number of techniques, tools and strategies which can be used to help promote continual improvement. There is no pre-determined set of strategies which must be selected, as long as the facility can demonstrate that the mechanisms it employs are adequate to achieve continuous improvement in pollution prevention *at that facility.* These strategies might include, but are certainly not limited to:

- material tracking systems,
- process control techniques
- employee feedback programs, with a commitment to management response
- design for the environment programs
  Design for the Environment programs refer to design of new products and services to consider reducing the need for or use of hazardous substances, pollutant or waste generation, resource consumption, product life cycle and environmental impacts.
- building pollution prevention criteria into checklists or screening processes for acquisition of new products or chemicals, process changes or new capital expenditures.
- incentive programs
  Many facilities create incentives for employees to generate constant identification for improved business performance or pollution prevention. Incentives used might include limited cash awards to recognize successful pollution prevention ideas, or recommendation letters to personnel files or a percentage of the cost savings to the organization from implementing an employee suggestion.
- linking environmental achievement with performance (or incorporating progress towards achieving environmental objectives and targets into performance evaluations.)
- supply chain management
  working with suppliers, vendors, subcontractors to leverage more pollution prevention in your operation.

Evaluation of Opportunities

This subsection also addresses technical and economic evaluation of opportunities. Ecology is looking for aspects of the EMS which ensure that as pollution prevention opportunities arise, they are adequately evaluated. Indicators that an appropriate level of evaluation is occurring might include:

- The use of environmental cost accounting in assessing economic viability of an option. This entails a process which accounts for the full cost of using a hazardous chemical or process and evaluate the benefits and costs of pollution prevention opportunities. Ecology is also sensitive to the fact that the level and extent of economic evaluation will be dependent on the specific situation within each facility.
- Implementation of pollution prevention and the use of environmental cost accounting to track cumulative savings to the facility from past implementation of pollution prevention opportunities.

APPENDIX B

ENVIRONMENTAL PERFORMANCE INDICATORS

To track conformance of ongoing activities with objectives and targets as required in the annual progress report, a facility may find it useful to identify environmental performance indicators. These indicators may also be useful in the evaluation of pollution prevention opportunities, required for continuous improvement (2.1.2), to set and maintain objectives and targets (2.2.1) and to undertake periodic assessment of the EMS system. (2.3.1)

Examples of environmental performance indicators include:

- ✔ net use of water
- ✔ toxic release incidents
- ✔ discharge of effluents to water in lbs/unit of production
- ✔ hazardous waste in lbs/unit of production
- ✔ hazardous substance use in lbs/unit of production
- ✔ cost of pollution prevention measures — annual and cumulative
- ✔ savings resulting from pollution prevention — annual and cumulative

Qualitative indicators may be useful where quantitative ones are not feasible. Selection of indicators should reflect the objectives and targets of the facility and the cost of collection and analysis.

Environmental cost accounting (ECA) provides a potential source of key environmental performance indicators. Environmental cost accounting establishes a means to identify the economic costs to the facility resulting from its environmental impacts, including costs related to the use of hazardous materials and the management of hazardous wastes. Environmental cost accounting also describes the means by which the costs of pollution prevention measures will be compared to the cost of current processes or procedures which generate environmental impacts.

Environmental cost accounting is not a required element in the EMS. The EMS commitment to continual improvement must be documented by procedures to evaluate the economic feasibility of pollution prevention opportunities. (2.1.2) In some, but not all cases, environmental cost accounting would an element in such evaluation.